

REMARKS/ARGUMENTS

Reconsideration of the above-identified application in view of the following remarks is respectfully requested. Claims 6-8 are pending.

I. Rejection of claims 6-8 under 35 U.S.C. 112

Claims 6-8 stand rejected under 35 U.S.C. 112. This rejection is respectfully traversed for at least the following reasons.

First, claims 6-8 no longer recite that the antenna body is integrated into the plastic material of the frame by injection-molding and is completely covered with the plastic material of the frame. Claims 6-8 now recite that the antenna body and the plastic material of the frame are integrally molded by injection-molding such that the antenna body is embedded in and completely surrounded by the plastic material of the frame.

Further, support for this present subject matter of claims 6-8 is found both in the drawings and written specification. In particular, the specification discloses the following at page 4, lines 2-6:

“In FIG. 1, the antenna body appears as raised above the outer surface of the vent frame and covered with plastic material. As seen in FIG. 2, the antenna body is in fact embedded in the body of the vent frame. This is achieved by placing the antenna body in a cavity of an injection mold and injecting the plastic material around the antenna body.”

At page 2, lines 21-22, the specification discloses that one advantage of embedding in and overmolding the component, such as an antenna, with the frame is that “the component is sealed in the plastic material and thus well protected from deterioration by environmental influence”. Based on these teachings, it is well

apparent that the antenna body is embedded in and completely surrounded by the plastic material of the frame. Otherwise, the antenna body could not be sealed in the plastic material and be well protected from deterioration by environmental influence.

Furthermore, Figs. 1 and 2 also show that the antenna body is embedded in and completely surrounded by the plastic material of the frame. In particular, Fig. 2, which is a cross section of Fig. 1 taken along line II-II, shows the plastic material around the antenna body. Fig. 1 shows the entire antenna body with plastic material around it. No lines or different hatchings are shown to indicate any exposed portion of the antenna body or break in the plastic material.

Therefore, in view of the above-mentioned reasons, the rejection under 35 U.S.C. 112 should be withdrawn.

II. Rejection of claims 6-8 under 35 U.S.C. 103(a)

Claims 6-8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0022616 to Stiehl ("Stiehl").

Withdrawal of this rejection is respectfully requested for at least the following reasons.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). 35 U.S.C. § 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject

matter pertains.” In making a determination of obviousness under 35 U.S.C.

§103(a):

...the scope and contents of the prior art are determined; the differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. Graham v. John Deere, 383 U.S. 1, 17-18, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966).

Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727; 2007 U.S. Lexis 4745, 36-37; 75 U.S.L.W. 4289; 82 U.S.P.Q.2d 1385, 1396 (2007) (emphasis added). Also, the U.S. Supreme Court in KSR Int’l. Co. V. Teleflex, Inc. noted that the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and that it was “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements in the manner claimed.” *Id.*, 82 U.S.P.Q.2d at 1396.

Stiehl discloses an air vent 10, in particular for venting the interior of a vehicle. As disclosed at Paragraph [0017] of Stiehl. An antenna 62 is fitted to a frame 12 of the air vent 10. When fitting the antenna 62, a connecting cable 68 is guided through a mounting opening 60 in the frame 12. A protuberance on the antenna 62 is inserted into the mounting opening 60 to center the antenna on the frame 12. The antenna 62 is fixed to the frame 12 by means of three fastener points in the region of

a recess 50, as well as by protrusions 70 on the antenna cooperating with latching tabs 46 on the frame 12.

1. The Stiehl reference does not teach or suggest all of the claim limitations of claims 6-8.

Claim 6 recites a vehicle body air vent that comprises a frame and that the antenna body and the plastic material of the frame are integrally molded such that the antenna body is embedded in and completely surrounded by the plastic material of the frame. There are several advantages associated with this feature, namely that assembly costs are reduced; tolerance problems are avoided; the component is safely attached to the frame of the air vent; the number of parts is reduced; there is a quality improvement through reduction of the production steps or sources of error; fewer tools can be used; the sealing on the vehicle body is improved; and the antenna is well protected from deterioration by environmental influence. The Stiehl reference does not teach or suggest an antenna body and plastic material of a frame integrally molded such that the antenna body is embedded in and completely surrounded by the plastic material of the frame.

Stiehl discloses an antenna 62 that is fitted to the frame 12 by the protuberance being inserted into the mounting opening 60. The antenna 62 is fixed to the frame 12 by means of three fastener points in the region of recess 50. The antenna 62 is also fixed to the frame 12 by protrusions 70 cooperating with latching tabs 46 to form a latching connection. In fact, Fig. 1 of Stiehl shows that the antenna is fitted onto the frame and the side of the antenna facing away from the frame is exposed.

The antenna 62 disclosed in Stiehl, when inserted into the panel aperture in the vehicle is sandwiched between the plastic frame 12 and the vehicle in which the frame is mounted, as the Examiner has pointed out. However, the antenna of Stiehl is not surrounded by the plastic material of the frame 12 of the air vent, as recited in claim 6. The antenna 62 has the material of the frame 12 on one side and the material of the vehicle on the other side.

Further, claim 6 clearly recites that the antenna is completely surrounded by the plastic material of the frame. This results from integrally molding the antenna body to the frame. Hence, the antenna of the present invention is also protected from physical damage when it is not mounted in the vehicle. By contrast, as the Examiner has also pointed out, the antenna disclosed in Stiehl will be sandwiched between the plastic frame structure and the vehicle only when mounted to the vehicle.

Therefore, for the reasons set forth above, the rejection of claim 6 under 35 U.S.C. 103(a) fails to establish a prima facie case for obviousness, because the Stiehl reference does not teach or suggest all of the claim limitations of claim 6.

2. There is no reason that would have prompted a person of ordinary skill in the relevant field to modify the Stiehl reference to include the subject matter recited in claim 6.

There is no reason that would have prompted a person of ordinary skill in the relevant field to modify Stiehl to provide that an antenna body and the plastic material of the frame are integrally molded such that the antenna body is embedded in and completely surrounded by plastic material of the frame.

The Office Action states that it would have been obvious "to have integrated the antenna into the plastic since such a modification would not affect the performance of the antenna, nor does it solve any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one having ordinary skill in the art and it has been held that the term "integral" and its derivative is sufficiently broad to embrace constructions united by such means as fastening and welding". However, this is not a reason that would have prompted a person of ordinary skill in the relevant field to modify Stiehl to provide that an antenna body and the plastic material of the frame are integrally molded such that the antenna body is embedded in and completely surrounded by plastic material of the frame.

One of ordinary skill in the art would find no need to modify Stiehl to provide this feature. The Examiner has stated that the antenna of Stiehl, when mounted into the vehicle, is sandwiched between the plastic frame 12 and the vehicle in which the frame structure is mounted. Thus, the Examiner contends that the antenna would be completely surrounded and therefore would meet the applicants' need of not being affected by deterioration by environmental influences. However, Stiehl teaches that the gasket 86 seals off the air vent so that the antenna is accommodated in the vehicle safe from physical damage (see paragraph [20]). Thus, the antenna is protected from physical damage due to the gasket, but there is no reason that would prompt a person of ordinary skill in the relevant field to completely surround the antenna by the plastic material of the frame itself. Also, since the antenna in Stiehl is mechanically attached to the frame and is protected from physical damage by virtue of the gasket, one of ordinary skill in view of Stiehl could be lead away from

modifying Stiehl to completely surround the antenna by the plastic material of the frame.

Further, paragraph [0003] of Stiehl states that the object of the invention is to accommodate an antenna in a vehicle so that it has good transceiver performance while being simple to fit. Stiehl also requires that there is a connector plug or mounting opening 60 to center the antenna 62 on the frame. Yet, having an antenna fitted to the frame 12 in the manner disclosed by Stiehl so as to achieve a simple fit is entirely different than providing an antenna embedded in a frame so as to completely surround the antenna with the plastic material of the frame.

Moreover, it is respectfully submitted that the feature with respect to the antenna body and the plastic material of the frame being "integrally molded" is not simply an obvious matter of design choice, as concluded by the Examiner on page 4 of the Office Action of March 12, 2007. Sufficient reasoning must be provided to substantiate the claim of obvious design choice. For example, the U.S. Court of Appeals for the Federal Circuit in In re Chu, 55 F.3d 292, 36 USPQ2d 1089, 1095 (Fed Cir. 1995) held that placement of a SCR catalyst within a bag retainer would not have been merely a matter of "design choice", since there is no teaching or suggestion in the prior art that would lead one of ordinary skill in the art to modify the structure of the Szymanski reference to place the SCR catalyst within a bag retainer as opposed to between two filter bags as disclosed in Szymanski, and since Chu's technical evidence relating to the frailty of fabric filters during pulse-jet cleaning clearly counters the assertion that placement of the catalyst in the baghouse is merely a "design choice."

The Office Action does not provide sufficient reason to substantiate the claim of obvious design choice with respect to the antenna body and the plastic material of the frame being "integrally molded". The Examiner states that Stiehl discloses an antenna (62) that when mounted into the vehicle, the antenna will be sandwiched between the plastic frame structure (12) and the vehicle in which the frame structure is mounted. The antenna will be completely surrounded and therefore meet the applicants need of not being affected by deterioration by environmental influences. The Examiner then argues that this clearly shows that the applicant's condition can be met without having to be integrally molded into the plastic and it is for this reason that the "integrally molded" is an obvious matter of design choice (see Pages 3 and 4 of the Office Action of March 12, 2007).

This is not a suggestion or reason that would prompt a person of ordinary skill in the relevant field to modify Stiehl to provide that the antenna 62 and the plastic material of the frame structure 12 are integrally molded. The Examiner even admits that Stiehl's current structure already prevents the antenna from being deteriorated by environmental influences. One of ordinary skill in the relevant field would not be prompted to modify Stiehl to provide that the antenna 62 and the plastic material of the frame structure 12 be integrally molded to prevent the antenna from being deteriorated by environmental influences, because the current structure of Stiehl already solves this problem.

Therefore, there would not be a reason that would have prompted a person of ordinary skill in the art to modify Stiehl to provide that an antenna 62 and the plastic


material of the frame 12 are integrally molded such that the antenna is embedded in and completely surrounded by plastic material of the frame.

Claims 7 and 8 depend from claim 6 and are therefore allowable as depending from an allowable claim and for the specific features recited therein.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this matter to our Deposit Account No. 20-0090.

Respectfully submitted,


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